

MEMORANDUM

To: Board of Regents

From: Board Office

Subject: Register of Iowa State University Capital Improvement Business Transactions for Period of December 17, 2004, Through February 3, 2005

Date: January 19, 2005

Recommended Actions:

1. Approve the Phase 1 project descriptions and budgets for the following major capital projects, as defined by Board policy:
 - a. **College of Veterinary Medicine—Teaching Hospital and Diagnostics Laboratory Renovation** project (\$51,050,000) (see pages 2 through 4).
 - b. **Coover Hall Addition and Renovation** project (\$16,500,000) (see pages 5 and 6).
 - c. **Dairy/Animal Science Education and Discovery Facility** project (\$15,350,000) (see pages 7 and 8).
 2. Approve the project description and budget for the **Memorial Union Parking Facility—Structural Repairs** project (\$3,400,000) (see page 9).
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Executive Summary:

Requested
Approvals

Project descriptions and budgets:

Phase 1 of the **College of Veterinary Medicine—Teaching Hospital and Diagnostics Laboratory Renovation** project (Phase 1 budget of \$51,050,000) which would renovate existing areas and construct new space for the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory to provide modern academic facilities to ensure accreditation, respond to the changing demands for the College's services, and provide facilities that are biosecure (see page 2).

Phase 1 of the **Coover Hall Addition and Renovation** project (Phase 1 budget of \$16,500,000) which would upgrade the facility to meet the modern needs of the Department of Electrical and Computer Engineering (see page 5).

Phase 1 of the **Dairy/Animal Science Education and Discovery Facility** project (Phase 1 budget of \$15,350,000) which would construct a new dairy education and research facility to consolidate the operations of the Dairy Research Farm and Dairy Teaching Farm (Phase 1), and construct a pavilion (Phase 2) to provide an arena with teaching and meeting facilities to house educational seminars, competitive events, and classes for all animal species (see page 7).

Memorial Union Parking Facility—Structural Repairs project (\$3,400,000) which would correct the deterioration of the structure's post-tensioning system and concrete floor slab, thereby extending the useful life of the parking ramp (see page 9).

Background and Analysis:

College of Veterinary Medicine—Teaching Hospital and Diagnostics Laboratory Renovation

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2003	Received Report
Permission to Proceed		Sept. 2003	Approved
Architectural Selection (InVision Architecture, Waterloo, IA, in association with ED2 International, San Francisco, CA)		Sept. 2004	Approved
Authorization for Executive Director to Approve Negotiated Design Agreement(s)		Sept. 2004	Approved
Approval of Negotiated Design Agreement—Programming and Master Planning Services (InVision Architecture, Waterloo, IA)	\$ 1,229,325	Jan. 2005	Not Required*
Phase 1 Project Description and Total Budget	51,050,000	Feb. 2005	Requested

* Approved by Executive Director in accordance with Board procedures.

Background The College of Veterinary Medicine building was designed and constructed in the 1970s.

While minor remodeling work has been undertaken since the building's construction, the laboratory and teaching facilities do not meet modern veterinary medicine requirements.

Accreditation Issues - Facilities Issues of facilities deterioration emerged in connection with the College's accreditation by the American Veterinary Medical Association (AVMA) in 1996.

The most recent accreditation site visit by the AVMA took place in 2003; the accreditation report will be presented to the Education and Student Affairs Committee at the March 2005 Board meeting.

The Phase 1 project budget presented this month for approval includes

funds to address facility improvements noted in the accreditation report.

Other Facility Needs

In 2001, the University undertook a study to evaluate the facility needs of the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory in response to the evolving mission of the College of Veterinary Medicine.

- Major changes affecting the Veterinary Teaching Hospital include:
 - Shifts in the demand for large animal veterinary services from food animals to equine, to large population (herd) medicine, and for rapid computer-based diagnostic reporting systems;
 - Demand for more extensive and invasive procedures for companion animals; and
 - Continuing demand for new technologies in surgery, imaging, rapid diagnostic pathology and medicine, and isolation for infectious diseases.

The changing mission for the Veterinary Diagnostic Laboratory involves recognition of an increasing number of infectious disease risks throughout the state of Iowa and the nation, particularly as they relate to biosecurity and food safety.

The feasibility study found that significant facility improvements are needed to provide additional space to address current needs and the evolving mission of the College, to provide modern academic facilities to ensure accreditation, and to provide facilities that are biosecure.

Project Scope

In response to the accreditation requirements and other needs of the College, the University wishes to renovate a portion of the Veterinary Teaching Hospital and Veterinary Diagnostic Laboratory areas, and construct new space for these units.

While the specifics of the project scope are currently under development, the project would provide remodeled and/or expanded space for the hospital clinical/treatment areas (exam, imaging, surgery and recovery areas for food production animals, equine, and companion animals), the Biological Safety Level (BSL)-3 laboratory for select agent diagnostics, and faculty and staff offices.

- The renovation work, which would address approximately 90,000 net square feet, would result in the relocation of some functions within these areas to improve function, animal flow, and security.
- The new construction areas would total approximately 35,000 net square feet.

The project would also upgrade the chilled water equipment at the Veterinary Medicine complex; the existing equipment has exceeded its expected life and additional chilled water capacity will be required to support the expanded facilities.

Additional Information

The University will complete a master plan for the project to establish a framework for the logical progression of the work to ensure that the operations of the Veterinary Teaching Hospital and Veterinary Diagnostic Laboratory are maintained during construction.

Phase 1 Project Budget

The University reports that the required accreditation improvements will be addressed in the Phase 1 project.

Phase 1 Project Budget

Construction Cost	\$ 39,667,000
Professional Fees	8,900,860
Movable Equipment	515,000
Relocation	174,500
Contingency	<u>1,792,640</u>

TOTAL \$ 51,050,000

Source of Funds:

2004 General Assembly Bonding Authorization	\$ 38,750,000
Utility Infrastructure Funds	3,000,000
Private Giving	<u>9,300,000</u>

TOTAL \$ 51,050,000

Future Phases Anticipated Cost/Funding

The University will evaluate additional improvements for the Veterinary Teaching Hospital and Veterinary Diagnostic Laboratory, and the associated costs, in the programming phase of the project, which is currently underway.

Coover Hall Addition and Renovation

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		March 2003	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2003	Received with Capital Request
Architectural Selection (OPN Architects, Cedar Rapids, IA, in association with Ellenzweig Associates, Cambridge, MA)		Sept. 2004	Approved
Authorization for Executive Director to Approve Negotiated Design Agreement(s)		Sept. 2004	Approved
Architectural Agreement—Programming and Schematic Design (Phases 1 and 2); Design Development through Construction (Phase 1) (OPN Architects, Cedar Rapids, IA)	\$ 1,950,055	Dec. 2004	Not Required*
Phase 1 Project Description and Total Budget	16,500,000	Feb. 2005	Requested

* Approved by Executive Director in accordance with Board procedures.

Background

The Department of Electrical and Computer Engineering is one of the University's largest and fastest growing departments.

Improving the ranking and international reputation of the Department of Electrical and Computer Engineering, and the College of Engineering, is paramount to the success of the University's strategic plan.

The Coover Hall research and teaching labs are integral to attracting and retaining outstanding faculty for the Department of Electrical and Computer Engineering

The majority of the Department is housed in Coover Hall. However, due to a shortage of space in the building, other functions are housed in other scattered locations, both on and off campus.

Coover Hall consists of the main building constructed in 1948 (56,850 gross square feet), and two additions constructed in 1948 and 1959 (10,420 gross square feet and 7,050 gross square feet, respectively). (A map indicating the location of the building is included as Attachment A.)

While certain areas of the building have been upgraded to accommodate the changing requirements of the Department, the building does not meet the current needs of a modern, technology intensive program.

The building's deficiencies include:

- Limited floor-to-floor heights which restrict the existing mechanical system;
- Undersized and inflexible electrical service;
- Insufficient cooling which is provided by window air conditioning units; and
- Structural limitations that restrict the ability to convert space for other uses.

Project Scope

In response to these deficiencies, the University wishes to construct an addition to Coover Hall of approximately 57,000 gross square feet to provide a state-of-the-art teaching and research laboratory facility. The project would also include minor demolition and remodeling of existing space and the upgrade of building systems.

The Phase 1 project would generally consist of the construction of new space; the Phase 2 project would generally consist of the remodeling of existing space and building system upgrades.

Phase 1 Project Budget

The following is the Phase 1 project budget.

<u>Phase 1 Project Budget</u>	
Construction Cost	\$ 13,256,770
Professional Fees	2,444,470
Movable Equipment	210,000
Relocation	50,000
Contingency	<u>538,760</u>
TOTAL	<u>\$ 16,500,000</u>
Source of Funds:	
2004 General Assembly Bonding Authorization	\$ 8,250,000
Private Giving	<u>8,250,000</u>
TOTAL	<u>\$ 16,500,000</u>

Phase 2 Anticipated Cost/Funding

The Phase 2 project has a currently estimated cost of \$10,000,000; the project scope may be expanded if fund sources can be identified. The Phase 2 project would proceed as funding is available.

Dairy/Animal Science Education and Discovery Facility

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed—Phase 1		Sept. 2003	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2003	Received Report
Permission to Proceed—Phase 2		Aug. 2004	Requested
Interim Review and Consideration of Capital Project Evaluation Criteria		Aug. 2004	Received Report
Program Statement—Phases 1 and 2		Aug. 2004	Approved
Architectural Agreement—Phase 1 Schematic Design through Construction, and Phase 2 Schematic Design (OPN Architects, Des Moines, IA)	\$ 1,241,061	Aug. 2004	Approved
Phase 1 Project Description and Total Budget	15,350,000	Feb. 2005	Requested

Background The 2002 General Assembly (SF 2316) directed Iowa State University to sell the Dairy Research Farm located in Ankeny, Iowa.

- The farm, which consists of 1,100 acres surrounded by the City of Ankeny, is inhibiting the City’s future growth; the existing facilities at the farm are extremely outdated.
- The legislation directs that the proceeds from the University’s sale of the farm are to be used to establish a new dairy research and dairy teaching facility, or for the University’s Plant Sciences Institute.

The 102 acre Mortensen Road Dairy Teaching Farm, which was closed by the University in the fall of 2003, is located southwest of the University campus in Ames and is surrounded by City residential areas. In June 2004, the Board approved the demolition of a number of outdated, deteriorated and unsafe structures at the farm.

All dairy research and outreach and much of the formal teaching activities have been located at the Ankeny dairy site since the closure of the Mortenson Dairy Teaching Farm.

Project Scope The Phase 1 project would construct a new dairy education and research facility to provide a single education and research operation to enhance recruitment and retention of students and strengthen research initiatives.

The program for the Phase 1 project previously approved by the Board includes construction of several facilities totaling approximately 310,000 gross square feet to house 500 milking cattle and related animals and teaching and meeting space. The facilities would serve as the primary site for education and research activities of the University’s dairy science programs.

- The Phase 1 facilities would foster collaboration among scientists from the Colleges of Agriculture and Veterinary Medicine, the USDA National Animal Disease Center, regional land-grant universities, and other dairy entities, with the goal of becoming the premier dairy-related education and research center in the Midwest in the areas of nutrition and nutrient management, animal health and well-being, breeding and genetics, and management systems.

The Phase 2 project would construct a pavilion at the new dairy education and research facility which would include an arena, and teaching and meeting facilities, to house educational seminars, competitive events, and classes for all animal species.

- The pavilion would supplement the Phase 1 facilities to enhance formal education, outreach, and student recruitment, and increase the national prominence of the University's dairy science programs. The pavilion would also be used for programs related to all species of domestic animals.

Project Site The proposed site for the facilities has yet to be determined; however, the anticipated location is on agricultural land south of the Iowa State University campus, on contiguous lands near the University's existing teaching and research farms, to optimize efficient resource utilization.

The University estimates that approximately 1,000 acres of land would be needed to support the consolidated farm operations.

Phase 1 Project Budget The Phase 1 project, for which approval of the budget is being requested, would be funded with proceeds from the sale of the Ankeny Farm.

Project Budget

Construction Cost	\$ 12,526,750
Professional Fees	2,084,250
Movable Equipment	365,000
Contingency	<u>374,000</u>
TOTAL	<u>\$ 15,350,000</u>

Phase 2 Anticipated Cost/Funding The Phase 2 project has an estimated cost of \$9,020,000; the University anticipates that this phase would be funded by proceeds from the sale of the Ankeny Farm, and private and/or industry support.

Memorial Union Parking Facility—Structural Repairs

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Aug. 2004	Approved
Authorization for Executive Director to Approve Selected Design Firm and Negotiated Design Agreement		Aug. 2004	Approved
Engineer Selection and Negotiated Agreement (Walker Parking Consultants, Minneapolis, MN)	\$ 208,600	Dec. 2004	Not Required*
Project Description and Total Budget	3,400,000	Feb. 2005	Requested

* Approved by Executive Director in accordance with Board procedures.

Background

In August 2004, the Board authorized permission to proceed for the **Memorial Union Parking Facility—Structural Repairs** project which would address the deterioration of the structure’s post-tensioning system and concrete floor slab to extend the life of the parking ramp.

The University’s recommendations for the parking ramp repairs were based on a condition appraisal (dated April 2004) performed by Walker Parking Consultants of Minneapolis, Minnesota.

This report indicates that structural deterioration in the concrete floor slab and the post-tensioning system of the parking ramp has reduced the load carrying capacity of the structure.

The project scope, as approved by the Board in August 2004, would remove all pour strip concrete, inspect and test all post-tensioning slab tendons, replace all damaged tendons and deteriorated concrete, and waterproof the concrete floor slab. The estimated cost for this scope was \$3.4 million.

Schedule

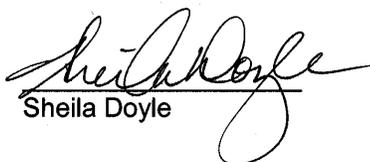
The University plans to begin construction in April 2005, with completion anticipated in November 2005; the parking facility would remain operational during the repairs.

Funding

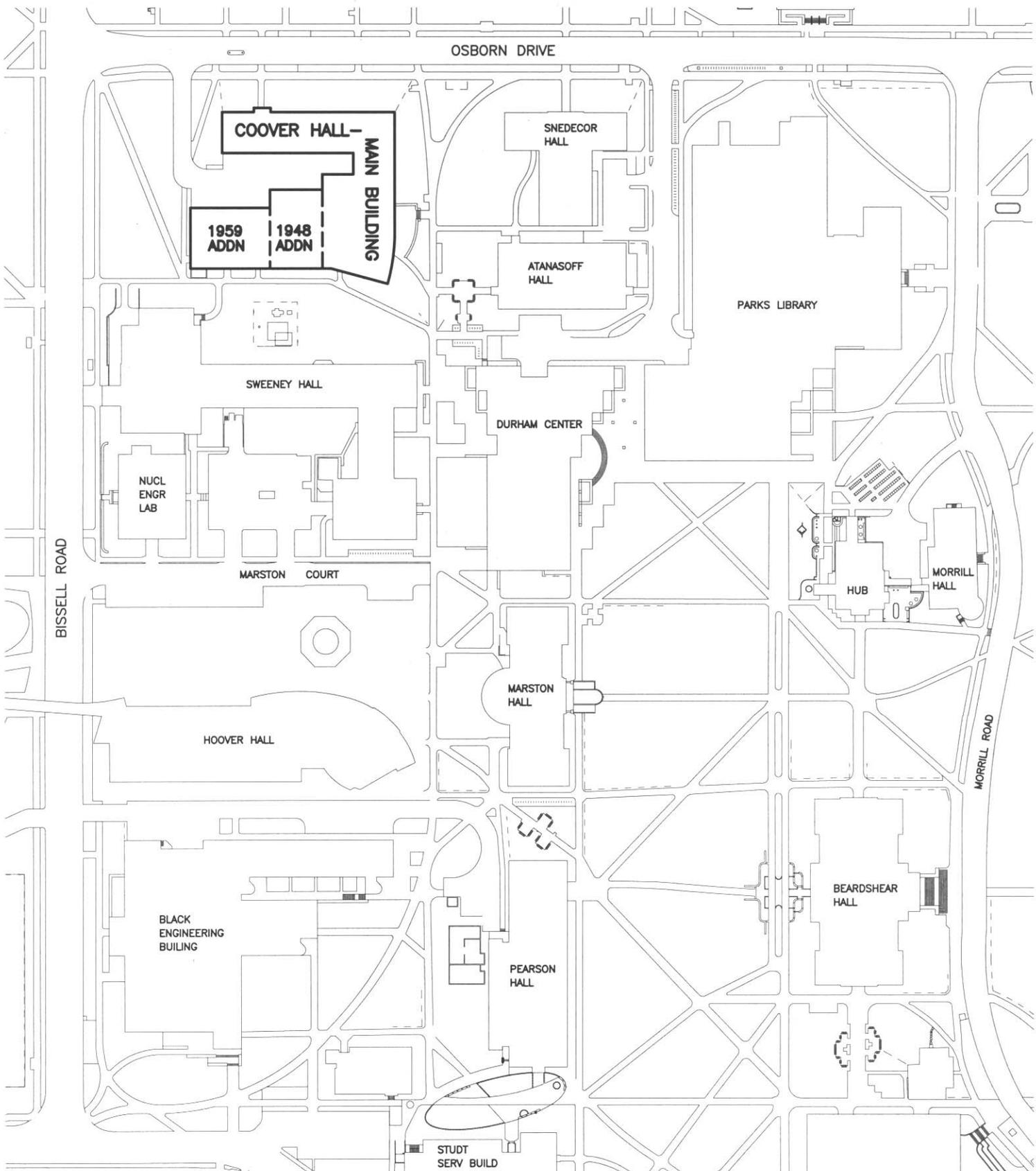
Memorial Union Revenue Bond Funds.

Project Budget

Construction Cost	\$ 2,860,540
Professional Fees	430,510
Contingency	<u>108,950</u>
TOTAL	<u>\$ 3,400,000</u>


Sheila Doyle

Approved: 
Gregory S. Nichols



REVISIONS: 	COOVER HALL ADDITION AND RENOVATION	APPROVED BY:
COMPLETED:		CHECKED BY:
ISSUED:		DESIGNED BY:
FACILITIES PLANNING AND MANAGEMENT		SCALE: Not to scale
	REQUEST NO.	